THE STUDENT'S GUIDE TO THE MEDICAL PROFESSION

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TO THE

MEDICAL PROFESSION

BY

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PREFACE.

THAT there is room for a *Student's Guide to the Medical Profession*, almost every one will admit. I had so often been consulted by the parents of youths who proposed to study medicine, and by the junior students themselves, respecting most of the points touched on in the following pages, that I determined to write this little book. I have tried to avoid unnecessarily overlapping the 'Students' Numbers' of the Medical Journals, one or other of which is indispensable to the medical student. They give every detail of expenses, names of lecturers, hours of lectures, value of prizes, certificates required by examining bodies, and the like. The following sheets are meant to supplement that information, with a firmly drawn outline of how a medical student should proceed to qualify, and what he can do when he has qualified; and they are meant also to contain hints towards the settlement of various questions of great importance; but which it would be too invidious for me to answer decisively myself. In noticing these, I have tried to bear in mind the inscriptions written over the three successive gates of an ancient city—

Be bold
Be bold, be bold, and be for ever bold.
Be not too bold.

In other words, the author, while fairly taking the reader into his confidence, has sought to remember Burns's advice—

> Aye free, aff hand, your story tell,
> When wi' a bosom crony;
> But still keep something to yoursel'
> Ye scarcely tell to ony.

To Mrs. Garrett Anderson, to Mr. Edmund Owen, Dr. Harris, Mr. Alfred Street, Mr. Marmaduke Prickett, and others who have given me invaluable assistance in preparing this Guide, I beg leave to offer my warmest thanks.

This being the first edition of this little book, it is tolerably sure to have many imperfections. If any reader will kindly point out to the author those which come under his (the reader's) notice, an endeavour shall be made to remove them, if ever the work reaches a second edition.

Lastly, he begs to add, that he is not unwilling to give a brief answer, either verbally or by correspondence, to any student or parent who does not find all he requires in print.

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THE STUDENT'S GUIDE

TO

THE MEDICAL PROFESSION.

CHAPTER I.

THE NATURAL QUALITIES DESIRABLE IN A MEDICAL STUDENT.

A GENTLEMAN dining with a certain great Lord Chancellor, I believe Lord Eldon, told his lordship that, there being a marked difference in the ability and character of his two sons, he proposed to make the plodder a doctor, and the more brilliant but less industrious one a lawyer. 'What a mistake!' replied the Chancellor, 'you should do the very reverse.' Whether Lord Eldon was right or wrong as to the requirements for a law student, he had attained the topmost round of his own ladder, and his opinion should be worth something; but that he made no mistake in the qualities desirable in a medical student, no one familiar with the healing art can deny. It is the privilege of this art, more especially of that branch of it called surgery, that it can use to the best advantage every gift with which a man can be endowed. Has he judgment? He needs it to the utmost in the diagnosis and treatment of case after case. Has he decision? How often life and limb depend on the surgeon's promptitude! How quickly the life-blood ebbs away whilst the irresolute mind swings this way and that! Has he memory? Consider the enormous number of dry facts the student has to remember on the day of his examinations. Has he tenderness of heart? Alas for thousands of the poor and wretched if he

has not! There are some among the outcasts of the world who never find a soul to recognise their common humanity except it is the doctor. They live their lives in shadow, like horses who work in the mines, and their only glimpses of sunshine strike from the heart of the doctor into their own. There should be no place in our profession for the cruel and indifferent. Decision of character, coolness of nerve, and directness of purpose are certainly required in a good operating surgeon; but what have these things to do with hardness of heart? But I suppose that when people say a surgeon should be hard-hearted they are only joking. Again, has the medical man originality? What boundless scope for its exercise! Look into the medical literature of the last fifty, forty, thirty, twenty, or even ten years, and behold everywhere the deep footsteps of firmly advancing knowledge. Has he gifts of person?

Potest quia posse videtur.

Who will deny that there is healing in the kindly eye and cheerful face, encouragement in the manly figure and intellectual aspect, even a soothing balm in the face and form of those on whom fortune has bestowed beauty and grace? And there are sick people who have almost been, like Lazarus, awakened from the dead by a voice.

Still the main question with parents is, What qualities for the medical student? I reply, a tolerably good memory for dry facts to get him through his examinations, and a fair judgment to use them when he becomes a doctor. To these he must add common sense.

With regard to physical qualities, there are very few doctors who hold a position in which a fair constitution is not required. But it is to be borne in mind that the study of medicine is not necessarily an unhealthy one. On the contrary, by attending to a few points it can be

made a very healthy one, as healthy as any occupation, except farming or the like. It is a fact that a sharp man who does his practical work regularly during the day, can get through all his examinations almost without opening a book, and certainly without working into the small hours of the morning. The practical work of a medical student is far from sedentary; most of the illnesses attributed to the dissecting-room have quite different causes; and the air both of dissecting-room and hospital is pure as compared with that of most offices and law-courts. There are, unquestionably, many delicate youths whose constitutions would gain strength during their medical studies. The medical student has three months' holiday a year. The country doctor lives chiefly in the open air. On the other hand, doctors are, as a profession, somewhat short-lived. Of course they are more exposed to infection than other people. In some practices the night work is excessive; and many medical students undermine their constitutions by dissipation at the most critical period of their lives.

CHAPTER II.

EXPENSES.

WHAT is the *minimum* expense? With some people this would be a minus quantity. There are Scotchmen and Englishmen, and even Irishmen, too, who could almost make a profit out of their own medical studies.

Each man must calculate his expenses for himself from the following data:—

(1) His medical studies must extend over four years at least. Unless he devotes all his time to them, they will probably last longer. Therefore it may be false economy to try to combine the study of medicine with the pursuit of something else for a livelihood. It may be

better policy to live in a garret on Australian meat, red herrings, and dry bread. In my opinion it is.

(2) Two-and-a-half of those years must be spent at a medical school. This includes six months' holidays, divided into four periods, two of two months each, and two of one month each.

(3) The remaining year and a half may be spent with any doctor. Many doctors would give a man board and lodging during this time merely for his services, especially if the student had been at a hospital a year and a half (the time required to pass 'the first college' examination), to begin with. I would recommend a poor man to commence his medical studies at a medical school in October, and to devote all his energies to passing his primary examination in Anatomy and Physiology at the end of his second winter. Then, if the money ran short, he should seek an assistancy. He could learn a good deal of surgery and medicine as an assistant. But time spent as an assistant before passing in Anatomy and Physiology, is almost time wasted.

(4) The expense during the above periods in money for food, lodging, clothes, pocket-money, &c., depends partly on the individual, partly on the town where he studies. Provincial towns are cheaper than London. But provincial students are, on the average, longer getting through their examinations than the London ones. Some provincial medical schools are only cheap in the sense in which inferior articles are cheap. See the chapter on *Choice of a Medical School.*

(5) There is much economy in two students of similar means living together. They halve the expense of gas and fire, and reduce by one-third the expense of rooms.

(6) Even in London (Islington for instance), decent rooms for two students can be got for as little as 15*s.* to

18*s.* a week, including all extras but coals. It is more usual to give 25*s.* to 30*s.*

(7) Something depends on the student's appetite.

(8) A landlady may cheat: but it is not necessary to permit her to do so. Landladies are women, and usually have much sympathy with poor students. My own experience, not small, has been that when I was rich, landladies used to plunder me; when I was poor they tried to plunder themselves.

(9) There are many poor students whose board and lodging never exceeds 25*s.* a week. This makes the cost of nine calendar months in London under £50.

(10) But the usual expense is about 37*s.* a week, equal to £74 for the nine calendar months. Hence it is usual for men to be allowed over £100 for board, lodging, and pocket-money during the winter and summer sessions. And this is not too much. It is emphatically mean and bad policy in a father who is moderately well to do, to offer his son less. The lad has very likely a brother at Oxford or Cambridge who is spending much more.

(11) Hospital fees are on or about £105 or £126 in London. Elsewhere they are less. For details, see 'Students' Numbers' of Medical Journals.

(12) The diploma of M.R.C.S. costs 20 guineas; that of L.R.C.P. 15 guineas; that of L.S.A. 9 guineas. Any one diploma will qualify to practise. It is usual to take two, one of which is always the M.R.C.S., and the other, of course, a medical diploma. The two form what is called 'double qualification.'

(13) In many cases it is well worth a man's while to have a private tutor. The fees are usually about £7. 7*s.* to £10. 10*s.* a term. One term for the Primary and another for the Pass are generally all that are necessary. But many men require much more, and never would get

through without. There are some tutors who take men in large classes, and charge only about 5 guineas for an unlimited time.

(14) As for clothes, the medical student wears about as much as other people. 'Costly thy habit as thy purse can buy, but not expressed in fancy,' is good advice for him.

(15) Books and instruments. £15 is a fair sum for these. About £5 are required to begin with.[1]

(16) Clubs and societies. The subscriptions are small.

(17) Football very cheap. Boating not expensive. Cricket expensive in London.

(18) Railway fare to and from home.

(19) To sum up, I believe a medical student's education usually costs about £700. It *can* be got for much less. Much more may be spent with great advantage.

(20) In spending money on the education it should not be forgotten that a little capital remaining after the education is finished is very desirable to start practice with.

See also *Students' Guide to the University of Cambridge.*

CHAPTER III.

THE PRELIMINARY EDUCATION DESIRABLE.

THE most desirable is the preparation for a degree in natural sciences at a university. It is almost as advantageous to have passed the Preliminary Scientific of the London University. Alas for the student who has to study for the last-mentioned examination after commencing his hospital work! If the student cannot obtain a scientific training before studying medicine, it is of prime importance that he should be able to write English accurately and

[1] The student must learn from his fellow-students and teachers what books, &c. to buy.

fluently, and that he should be acquainted with elementary natural philosophy. The student who knows the anatomy of the bones before entering at a medical school has a great advantage.

There are classes to prepare youths for the Preliminary Scientific examination of the University of London, held at the chief colleges and medical schools. It is very difficult to prepare for this examination by private study. The preparation requires about a year.

A knowledge of French and German is very desirable.

The best entrance examination is the matriculation of the London University. It admits to the professional examinations for F.R.C.S., M.B., B.S., M.D., M.S., B.Sc. (Lond.), and other degrees, from which first-class men sometimes find themselves excluded by reason of having neglected to matriculate before commencing their studies.

Each of the medical and surgical corporations which has the right of granting diplomas, except the London College of Physicians, holds, at regular intervals, an examination in general education; and the Universities hold similar examinations, usually called Matriculation Examinations. Until one or other of these Preliminary Examinations has been passed, medical education is not legally and officially recognised to have begun.

See the Appendix.

CHAPTER IV.

THE SEVERAL LEGAL QUALIFICATIONS AND HONORARY DEGREES OBTAINABLE, INCLUDING THE MINIMUM QUALIFICATION TO PRACTISE.

F.R.C.P. (Fellow of the Royal College of Physicians).
F.R.C.S. (Fellow of the Royal College of Surgeons).
M.D. of one of the British Universities.

M.B. (Bachelor of Medicine).

M.S. / M.C. } (Master in Surgery).

B.S. (Bachelor of Surgery).

M.R.C.P. (Member of the Royal College of Physicians).

M.R.C.S. (Member of the Royal College of Surgeons).

L.R.C.S. (Licentiate of the Royal College of Surgeons: a Scotch title).

L.S.A. (Licentiate of the Society of Apothecaries).

L.K.Q.C.P. (Licentiate of King's and Queen's Colleges of Physicians).

The place where the particular degree or diploma has been obtained is often added in an abbreviated form, e.g. M.D. Oxon., L.R.C.P. Ed.

As to the real relative value of English, Scotch, and Irish degrees and diplomas, that is a difficult question. But in England, English degrees and diplomas are preferred. London University has the highest reputation for difficult and searching examinations. Oxford and Cambridge offer splendid opportunities both for social and general literary and scientific culture.

Every one of these can be obtained in the ordinary four years' course, except the M.D., M.S. (Master in Surgery), F.R.C.P., and F.R.C.S. Each of the latter requires an additional year or two.[1]

The London M.B. is not often obtained in less than four years from passing the 'Preliminary Scientific M.B.'; and at least six years usually elapse between proceeding to Cambridge or Oxford and obtaining a qualification to practise. But in the case of Cambridge University the time can be shortened a little by taking honours. See special chapters on Oxford and Cambridge.

The danger of delays, the result of plucking, must

[1] F.R.C.P. is purely honorary.

never be left out of sight. These are commonest, greatest, and, I had almost added, most scandalously cruel, at the University of London.

In the eyes of the profession in England, Scotch and Irish university medical degrees, excepting those of Edinburgh and Trinity College, are regarded as being very much on a level with ordinary legal qualifications to practise; because it is believed that the examinations necessary to obtain most of them are not more difficult. The M.D. of Trinity College, Dublin, has had to graduate in Arts, and gets credit for that in the profession. And Edinburgh has a European and historic renown as a school of medicine, which would confer lustre on its graduates, whatever were the conditions on which they got their degrees. The chief value of the letters M.D. is that they produce an undoubted impression on the general public, especially upon the ladies; that they are necessary to the holders of some medical appointments, and that they are almost essential to consulting physicians. The highest qualifications are, from a mere commercial point of view, well worth the necessary expenditure of time and money; but if the student has not those articles to spend, let him get the M.R.C.S., and add to it the M.D. of one of the Scotch or Irish universities. This will involve two nominal years' residence at some university. The additional expense is small. The M.D. of the Queen's University can be obtained after six months' residence. If the student cannot go to Scotland or Ireland, let him take the L.R.C.P. London; or there is the M.D. of Durham.

In deciding upon what degrees or diplomas to study for, it should never be forgotten that there are many men who really have not sufficient natural ability or energy to justify them in aiming at the higher ones.

CHAPTER V.

THE DIFFERENT MODES OF BEGINNING MEDICAL STUDY; BY PUPILAGE, COUNTRY HOSPITAL PUPILAGE, OR AT THE RECOGNISED 'HOSPITAL AND MEDICAL SCHOOL.'

PUPILAGE with a general practitioner, which took the place of the old system of apprenticeship, is itself apparently giving way to the practice of beginning medical studies by passing straight from school or college to the hospital and dissecting-room. The latter plan would, in most cases, be economical; for a medical man cannot be expected to take a pupil without a fee. On the other hand, an intelligent, industrious boy will derive great advantage from spending a year with a first-class general practitioner. A lazy youth, with an unconscientious, ignorant practitioner, will only confirm his laziness, and perhaps make no advance in anything but the art of humbug.

It is an excellent thing to spend the first year of study as resident pupil to the house-surgeon of a large country hospital like those of Norwich, Exeter, Plymouth, Hull, Brighton, Lincoln, Wolverhampton, Nottingham, Derby, Bradford, &c. In many cases the house-surgeon is a superior man, and himself, an enthusiastic student, fond of teaching, and he is almost always young and fresh from some great centre of medical instruction. Youths acquire the scientific fervour from such men by a kind of contagion. Norwich, for instance, has been as famous for the nurture of the scientific spirit as for the propagation of pyæmia.

I have pointed out in a former chapter the great benefits to be derived from preliminary culture in science at a University or College, and the importance of completing this before touching the proper medical studies.

CHAPTER VI.

CHOICE OF A MEDICAL SCHOOL.

A YOUTH usually goes to some particular place for one or more of these reasons:—

(1) His father, or the surgeon with whom he has been pupil, went there before him.

(2) He knows, or can get an introduction to, some members or member of the staff.

(3) As a moth flies to the candle, though luckily without the same serious consequences, he is attracted by the glitter of names on the list of medical officers.

It is quite right to consider the names of the staff. Only look very little at the name of anybody over fifty years of age. The reputation of these great men benefits the students of their hospital little more than the blue ribbon of a Knight of the Garter enriches the State.

As for the value of introductions to members of the staff, what advantage are they likely to be? You do not suppose they will count for marks at the examination at the end of the first winter session? Ten to one they are burnt and forgotten before Christmas. After delivering your note of introduction to the Surgeon or Physician, he may possibly ask you to dinner, and then you will not see him again, except casually, for a year and a half, for your work will be in the dissecting-room rather than in the wards. Besides, you are quite independent of anything he can do for you. If you want to 'dress' for a man, be a good worker and the favour will be conferred by you, not by him. A decent youth will lose very little by coming up to a hospital unintroduced and standing on his own merits. He may then expect no favours, but he will be under no obligations.

(4) He prefers a large hospital; or

(5) He prefers a small one. Each has its advantages. Each has its advocates. Almost every one prefers the claims of his own school. Persons of exceptional ability have more scope to show their talents at a large than at a small medical school. At a small school they would find it easier to get on the staff eventually, if their taste lies that way; but the staffs of the small schools are constantly recruited from the alumni of the large ones. Large schools offer greater choice of friends and acquaintance, a wider field for observation, and a much more perfect machinery for teaching the student the groundwork of his profession. A large school has usually a fixed character and tone, which has perhaps been handed down for generations. The influence of Pott and Abernethy can still be traced at St. Bartholomew's, and I doubt not but that Astley Cooper and Addison have left their mark on Guy's, Liston and Sharpey on University, Green and Simon on St. Thomas's, Simpson and Syme on Edinburgh, &c. In the case of very small schools, a single strong-minded individual can alter the whole tone and character of the place for good or evil.

In the case of diffident men of moderate ability, offices, prizes, and clinical work are more easily obtained at a small than at a large school.

It should be borne in mind that a young medical man about to start in life often derives great help from the support of the staff of his school. The influence of the staff of a great school is usually, when compared with that of the staff of a small one, even more than proportionately great.

Having been so long in the habit of persuading students to enter at my own hospital, a large one, with a large school, I felt unable to do justice to the small

schools. I therefore asked Mr. Edmund Owen, of St. Mary's, to help me. In addition to what is stated above, in favour of the small medical schools, he urges that, in his opinion, the students are better known to each other, and held together by closer ties, which make the place a kind of happy home; that they conceive a greater affection for, and pride in, their alma mater, each student feeling that his own individual contribution to the credit or discredit of the school is visible, and not lost in the wide sea of a large school's reputation; that the students are known more intimately by their teachers, who thus can keep a careful watch over their progress; that although large hospitals present enormous material for observation and practice, this very advantage may, and often does, cause an 'embarras de richesses,' while small hospitals really furnish quite sufficient typical cases; and that, lastly, the crowd of students who accompany a fashionable teacher round the wards of a hospital, with a large school attached, are apt to get in each other's way, and see little.

There is one case in London, in which a large medical school is connected with a small hospital; that is, the case of University College. It will be obvious, on reflection, that the opportunities for clinical work must be more stinted here than anywhere else. On the other hand, the very fact that the school is so large in spite of the hospital's being so small, proves the high quality of the teaching. It is, I believe, the custom for the more energetic students of University College to make up for their hitherto scanty opportunities of clinical work by taking, when qualified, resident provincial hospital appointments, posts for which their careful previous training in observation, case taking, &c. well fit them.

The resident dresserships in many if not all provincial schools are valuable considerations in the eyes of poor

men. The holders of these posts get board and lodging gratis for six months in the interval between passing their anatomical and final examinations.

(6) He prefers some particular hospital for a special reason. 'The fellows there are more gentlemanly,' or they work harder, or they don't work so hard, or they play football better, or it is in a nice part of town, or in a convenient part of town.

(7) The fees are smaller. In considering this point, beware of false economy. See the 'Students' Number' of one of the medical papers.

(8) Prizes may tempt. See the advertised prospectus of the various schools, or a 'Students' Number.'

Provincial medical schools have the advantage of enabling local people to get their medical education at home. They have also most of the advantages and disadvantages peculiar to small schools.

Two persons out of three who have been educated *wholly* at a provincial school are ashamed of it. On the other hand, some of the most accomplished men in the country have been educated wholly in the provinces. To sum up, I think that the provincial student ought always to finish with at least a year in London, or Edinburgh, or Vienna, or Berlin.

CHAPTER VII.

RESIDENCE—HOME—COLLEGE—HOUSE OF MEDICAL MAN—HOUSE OF HOSPITAL TEACHER—LODGINGS IN TOWN OR SUBURBS—DISPENSING FOR BOARD AND LODGING.

THE advantages of home, its softening and refining influences, its comforts, the care which a mother can give to the health of a son whom she considers delicate—all these considerations are well known. On the other hand, most

men can do much more work anywhere than at home. It is very nice and very humanising to spend an hour and a half at the family dinner-table, in cheerful converse, and then to adjourn to the drawing-room, tea, music, odour of rose-leaves, &c. It cultivates the affections for a man to have to take his sisters out once a week and fetch them home twice or thrice; but all this kind of thing interferes sadly with work. Perhaps it need not, but it does.

King's College and St. Bartholomew's have each a 'college' attached, in which board and residence can be obtained, the student being subject to the supervision of a warden. The discipline, though less strict, resembles that of the colleges at Oxford and Cambridge. It is very good for men to live on the hospital premises when they are 'dressing' and 'clerking.' They, otherwise, are apt to miss many good cases which come in the evening and night.

Some medical men in general practice in the neighbourhood of hospitals take resident pupils. No doubt it is a check on a student inclined to be fast, to live amid the influences of a good family circle.

But my own opinion, and the opinion of most other people competent to judge, is that there is nothing like the house of a young hospital teacher. It is not my intention to take such a house and board pupils, so I hope to be credited with giving this opinion honestly. A man of thirty has every sympathy with a boy of twenty. A staid practitioner of fifty may not have this desirable sympathy. The former also, from his occupation as a teacher, understands exactly the requirements of the present day. The latter may be hopelessly out of date as regards educational matters. With regard to lodgings, the nearer a student lives to his hospital the better, unless he is too lazy to take any exercise without being obliged

to take it. Even in the latter case, residing far away may only result in an extravagant expenditure in omnibuses. It is healthier to live in an airy suburb, but railway journeys cost time. London is itself a very healthy place. In taking lodgings, the student should inspect a large number before fixing on one. He should enquire carefully as to 'extras,' and, if possible, get them included in the rent. Experience will teach him whether, in his own particular case, it is best to dine at home or in the City. It is good for two students to live together; it is economical and cheerful. If the students are already inclined to work, they will work all the more for the arrangement; and, even if they are inclined to play, they will very likely not work less. But in this matter much depends on individual character. Some horses go best in single harness, some in double.

Many students earn board and lodging by dispensing for a practitioner. Such situations can be heard of at the 'medical agents'.'

CHAPTER VIII.

DISTRIBUTION OF EXPENSES—POCKET-MONEY—SPECIAL MODES OF DEALING WITH YOUTHS OF A CERTAIN CHARACTER.

THE pocket-money should be fixed, and the student should be allowed to keep anything he may save out of his allowance for board, lodging, and washing. At all events for the first year, the parent is justified in expecting once a month a detailed account of the mode in which everything but the pocket-money has been spent. It would be very advantageous to the student to keep such an account of all his expenses for the whole four years. This plan really seems to make the money go half as far again. It prevents all frittering of it away.

If the student is known to have a tendency to laziness, the parent should, by all means, if he can afford it, put him to reside with a hospital teacher for the first two years, and insist upon work being done the first year. If a thoroughly lazy fellow does no work the first year, in most cases it would spare much trouble to take him away from London at once. It is not this kind of man who makes up in his second year for the deficiencies of the first.

The parent should spare no pains to find out how his son is behaving during his first year. If he has got into a bad, lazy set, and hardly ever appears at the hospital, take him from town at once, and banish him to the dullest little hamlet you can find for twelve months. Afterwards send him back to London to live with a young hospital teacher, and halve his old allowance of pocket-money. In these cases, treatment to be successful should be prompt.

CHAPTER IX.

PRIZES AND HONOURS.

THEY have a value far exceeding their intrinsic worth. A gold medal worth £5 has, before now, led to an income of a thousand a-year; moreover, it is good to try for them even if you fail.

> The reward is in the doing,
> And the rapture of pursuing
> Is the prize the vanquished gains.

Of course it is not exactly 'rapture' that a student feels when learning by rote the relations of the carotid; but he might, in some awful moment of his practical life, have to feel the exact reverse of rapture, if studying for a prize had not put those relations at his finger-ends.

The prizes vary in value, from Scholarships worth £100 to gifts of a few pounds worth of books. At Oxford

and Cambridge, Science Scholarships and Fellowships of great value often fall to medical students. The Radcliffe Travelling Fellowship at the former University is purely medical and worth £200 a-year.

Certain scholarships, both in general education and in science, may be competed for after or before entering at some of the hospitals in October. See the various Prospectuses.

CHAPTER X.

LECTURES.

A LARGE number of these are compulsory. This is unfortunate, for two reasons: the first is that many lectures are most uninstructive; the second is that it is often very inconvenient and injurious to have to attend lectures which clash with practical work, or which interfere with preparations for an Examination. The penalty for not attending lectures is a refusal to sign the delinquent up; that is, to give him the certificates required by the Examining and Licensing Bodies. This punishment is rarely inflicted if there is a fair chance of his passing his Examination.

With regard to note-taking during lectures, it is to be strongly recommended. With regard to making a fair copy of these notes at home in the evening, I suppose that would also be a good plan in a country where there were no text-books and where time was no object.

During unavoidable, compulsory lectures, if they are hopelessly bad, the student may recreate himself by sketching or going to sleep. But these amusements should be indulged in with discretion, or the student will hurt the feelings of some unfortunate lecturer, whose only crime is perhaps ignorance of his own utter incompetence.

I have made a short calculation, on good data, and estimate that twenty thousand guineas are annually paid by parents and guardians of medical students in order that a quarter of a million of golden hours of youth may be wasted by compulsion in listening to feeble matter vilely delivered.

CHAPTER XI.

DISSECTING—PRACTICAL PHYSIOLOGY—SURGERY—DRESSING—MEDICINE—SPECIAL DEPARTMENTS.

THE student cannot dissect too diligently. Like other arts, it can only be properly executed after some practice. However repulsive at first, it always becomes attractive when fair skill has been attained by the dissector. The most important advice is this: Keep your knives sharp, never let them get blunt; have a stone and strop by your side, and touch up your knife every few minutes. Anatomy is learnt almost without effort by the good dissector.

A dissecting case should contain at least four knives, and not less than two sets of hooks. Only one pair of scissors are necessary. The forceps should be carefully chosen, with attention to two details—viz.: 1. they should have a weak spring; 2. the points should not gape open when the instrument is firmly compressed. The ordinary blow-pipe is too small.

Practical Physiology.[1]—Every one has to do a certain amount of Practical Physiology now-a-days, and considering its importance we certainly ought not to grumble at this. The principal time should be devoted to Histology, or the microscopic appearances of the tissues. It is very

[1] Kindly contributed by Dr. V. D. Harris, Demonstrator of Practical Physiology.

necessary, therefore, to have a microscope, and if a good one is obtained at once, it will always be useful. The microscopes of Hartnack (1, Rue Bonaparte, Paris) are excellent. For £8 to £12 a very good one is to be had. The best of the English makers supply students' microscopes at, I believe, £5 5*s*. With a good microscope, a sharp razor, some glass slides and cover glasses, three or four needles mounted in handles, one can begin histology; afterwards, of course, other things are required, such as knives, scissors, and chemicals. To harden the materials before cutting sections, some preparation of chromium is used—*e.g.*, bichromate of potash or chromic acid, and methylated spirit.

As well as histology, all are supposed to do what is called physiological chemistry, or, in other words, to make out what the various secretions of the body and the tissues themselves consist of. This is a useful, although a difficult study, as great attention is now paid to it by physiologists, and to work well at it pays both in examination, and also, later on, in the wards of the hospital. Most of the experiments are shown by the demonstrators, and students only require therefore such chemical apparatus as they have used for practical chemistry proper. A part of the same subject of practical physiology consists in the use of various physiological instruments, such as the sphygmograph, hæmocytometer, spirometer, &c. This can of course only be done under the superintendence of the demonstrators.

It is an open question whether the student should go round the hospital wards regularly before passing his anatomical examination. I do not think one visit a week would be any great waste of time; but, on the other hand, the first year's man in the wards is perhaps a greater nuisance to other people than benefit to himself.

Surgery. Dressing.—Dressers are students who assist the house surgeon in the work of the surgical wards. It is their duty to be as punctual and energetic as if they were paid clerks. There are, at most hospitals, special dressers for the out-patients, and for the special departments of ophthalmic, cutaneous, orthopædic surgery, &c. The time for dressing is in the student's second or third year. It is not necessary to have read surgery before dressing.

Medicine. Clinical Clerks.—These are subordinate to the house physician, and work in the medical wards as the dressers do in the surgical wards.

Obstetric and other special Departments.—No student can consider his medical education completed unless he has attended carefully in each of these. At the medical schools there are arrangements by which the student can learn practical midwifery.

Final Examinations.—For the last two or three months before these, all practical work should be limited to attendance in the out-patient rooms and an occasional journey round the wards. In the out-patient rooms, more even than in the wards, the student acquires the practical information which carries him through his final examinations.

CHAPTER XII.

THE TIME IMMEDIATELY FOLLOWING QUALIFICATION.

THE young doctor has now a choice between these things:—

Some resident hospital appointment; house-surgeoncy; house-physiciancy; obstetric residentship; ophthalmic house-surgeoncy, &c; house-surgeoncy to a dispensary or poor law infirmary; the sea; lunacy—that is, of course, assistant medical officer to an asylum; public health officership; Government service; army, navy,

Indian medical service; assistantship; partnership; buying a practice; setting up in practice on speculation; emigration service; the colonies.

If he is desirous to become a Consultant or Specialist, some House-Surgeoncy or House-Physiciancy ought to be taken, and the M.R.C.P. or F.R.C.S. obtained as quickly as possible.

Medical education ought not to be considered to terminate naturally and properly at the time of qualification to practise. In some cases it has so to terminate; for instance, when a father dies suddenly, and the son has to go without delay to take up the practice left vacant. But, where possible, some resident hospital appointment should be taken for twelve months. The educational value of such a post is very great, and, in after life, its commercial value is no less, so well do the public appreciate that confidence and practical knowledge which a House-Surgeoncy gives to its occupant.

If it is necessary to choose between a House-Surgeoncy and a House-Physiciancy, the latter is often preferred, on the ground that most of the cases in general practice are medical. That is true; but not true to the extent often supposed by those thoughtless people who think and speak of surgery, as if it included only amputations and broken limbs, and forget that rickets, numerous skin diseases, venereal, urinary, bone and joint diseases, and many others equally common, all lie within the domain of surgery. An accomplished physician and man of the world once said to me, that he noticed clearly, when in consultation with general practitioners, that they are almost always good physicians, and almost always bad surgeons. Another thing to be considered is this—the public can judge for themselves of the work of the surgeon much better than they can of that of the physician.

A House-Surgeoncy is, in my opinion, worth more to the general practitioner than a House-Physiciancy.

Those who have the time will find the post of 'Resident' in one or other of the special departments of great value, especially if they propose to settle in a large town. In a large town, a special reputation may both lead to a large special practice, and act as an introduction to a general practice. An Ophthalmic House-Surgeoncy is an excellent thing for a person who proposes to go to India.

A resident hospital appointment introduces a man to a locality, and makes it much easier for him to make a practice there afterwards. For consultants, resident appointments are almost indispensable. In London, the Resident usually gets board and lodging free; in the country he gets, in addition, a salary usually of £80 to £100; and in many House-Surgeoncies there is a chance of earning about £20, more or less, by fees for evidence in Law Courts. Some country House-Surgeons are allowed to take Resident Pupils, who, of course, pay them for tuition and the Hospital for board and lodging.

The Resident Medical Officership in a Poor-law Infirmary is sometimes worth £225 or even £500 a year. These posts are not numerous.

Travelling appointments offer the advantages of travel and a sight of foreign countries, added generally to good pay, often £50 to £100 a quarter and all expenses; and they sometimes introduce to good society and valuable connections. They are usually obtained through the influence of the leaders of the profession.

The sea offers advantages similar to those of travelling appointments, but the pay is small, £8 to £10 a month. A sea voyage or two often helps to build up afresh the broken-down constitution of some poor fellow whose

student career has been a course of scanty fare, hard labour, and exhausting night work. Very striking sometimes is the change effected in twelve months from pale, hollow cheeks and timid manner to something of the bluff and sunburnt vigour and brave address of the careless sailor. The young medical man should not remain at sea too long. After twelve months it usually becomes demoralising to him from its laziness, and the temptation to drink which is apt to arise. A sea voyage or two often lead the way to settlement in one of the Colonies.

Lunacy offers the following temptations to those who devote themselves to its treatment:—Good salaries and comfortable posts, work not usually severe but very interesting to some men, opportunities for study and literary work. Unless a public appointment is taken, either capital or pre-eminent ability is required to make the best of this branch of the profession. Gentlemen of lively disposition, with musical accomplishments and a taste for private theatricals, dancing, &c., are preferred as clinical assistants in a lunatic asylum.

Public Health Officerships are sometimes of small value, *e.g.*, £30 a year, and given to persons in private practice. But there are combinations of districts, as well as individual large towns, which expect their health officer to devote himself entirely to sanitary matters, and give him a salary of £500 to £1,000 a year. Those who mean to take these positions should obtain a diploma in sanitary medicine from one of the Universities. Any qualified medical man is admissible to the examinations for these sanitary diplomas. The medical officer of public health has to enquire into and report upon the causes and progress of epidemics, to superintend the construction and working of fever hospitals, to report upon water supply, &c.

An able and well-qualified young man can so make use of one of these posts as to cause it to introduce him to a district where he eventually proposes to settle as a consulting physician. When he has held the health officership long enough, he should seek an appointment as physician to the local infirmary, and then start practice.

The Medical Departments of the Army and Navy are now in an unsettled, unsatisfactory, and transitional state.

The Indian Medical Service offers fair pay, fair prospect of earning more money, and good opportunities of obtaining both medical and surgical experience by practice. But against these recommendations must be set off the climate. To how many of our Anglo-Indians who have gone out blooming English youths, shall we have some day to quote Laura's observation to Beppo :—

> Bless me ! Did I ever ? No, I never
> Saw a man grown so yellow ! How's your liver ?

Among my own hospital friends who have passed through the Suez Canal, one at least will return to home and 'Bardlemy's' no more, and that one as fine a fellow as ever Kent sent forth for the service and honour of Old England.

It is advisable to take an assistantship in some private practice for a short time, if the young surgeon inclines towards private practice himself, especially if he has never been pupil to a general practitioner. Sometimes such assistantship leads to partnership. When a so-called 'Assistantship with a view to Partnership' is taken, there should always be a clear understanding about the conditions and prospects ; otherwise the 'view to partnership' seen by the principal will differ from that in the mind's eye of the assistant as much as if they looked at it through similar telescopes, but from opposite ends.

Qualified assistants usually get from £60 to £120 a year, besides board and lodging.

Ordinary practices can be bought and sold for a year or a year and a half's purchase; and uncommonly good investments they usually are. Of course these investments are not always good; but that is frequently due to the buyer's want of ordinary care and sharpness. In buying a practice there is no need to be afraid of going to the office of an agent, but there is considerable need of wariness when you get there. The agent is very likely an honourable man of business, so far as business honour goes; but it is not his business to supply the buyer with any knowledge of the world that may be lacking to him (the buyer). The agent's interest is to sell the practice well, and thus get a good commission.

The buyer has to consider—1. What income the practice has been bringing in hitherto; 2. Whether that income has been increasing or not; 3. Whether the patients are of a kind likely to come over to him if he buys the practice; 4. How much is derived from appointments, and to what extent they are transferable; 5. He should carefully compare his own qualities and qualifications with those of the seller of the practice, and with those of the surrounding rival practitioners; 6. He should ascertain the reason of the seller for parting with the practice.

In attending to the first point, he should not take for gospel any loose statement, but should carefully compare with one another portions of the ledger, day book, and cash book selected here and there. If there has been any serious tampering with the books, such an investigation will certainly discover it. With regard to the third point, it ought to be considered together with the fifth point. For instance, if the new practitioner be ignorant

and snobbish, the better class of patients are not likely to rush over to him.

Many disappointments ensue from neglecting to think carefully over the fifth point. Suppose, for instance, an insignificant-looking, vulgar person buys the practice of a man who has made it by the force of every physical gift added to charming and cultivated manners. Is it astonishing that the patients should not troop over in a flock? 'Look on this picture and on that,' they say, and send for old Mr. Sheepshanks in the market-place, who, though nowhere when in competition with Mr. Apollo Mercurius, is yet a formidable rival to that conceited new comer, Dr. Prigg.

A partnership is generally considered safer to buy than an entire practice, but it has dangers of its own. One friend of mine lost a thousand pounds by buying himself into partnership with a person whom he soon discovered to be bankrupt in his affairs and criminal in his practice.

There are many advantages to tempt two surgeons already in practice to go into partnership together. If one is away, patients object less to seeing a partner than an assistant. If one surgeon sees that certain patients are getting tired of him and desire a change, he may adroitly introduce his partner, who can coyly accept them as *his* patients. Then the two partners chuckle over the little manipulation, knowing that the firm has lost nothing.

Certain practices are much more expensive to buy than others, especially fashionable practices without any dispensing.

In addition to the mere purchase-money of the practice, it is necessary to provide funds for furniture, fittings, rent, wages, living, and perhaps horses, in the interval between taking possession of the practice and getting the

first set of bills out and paid. The 'ready cash receipts' of many practices are enough for current expenses.

With regard to the plan of taking a house, putting up a brass-plate, and perhaps a red lamp, wearing good clothes, getting introductions to as many people as possible, and otherwise partly by pushing, partly by patience, *making* a practice, this plan can only be recommended under special circumstances. It requires a little, sometimes a great, capital. It cannot be done in a sober, slow place where the doctors already in possession are sound men well liked by their patients. Here, in parenthesis, I will just drop a warning. There is scarcely a locality in which you will not find some foolish and fussy persons who will proclaim loudly that it offers a splendid opening for a young medical man. For instance, you meet out at dinner Mrs. Gabble, a friendly lady, who assures you that there is a fortune to be made in their village. You look it out in the county directory, and find it thus described:—'Mudthorpe, par., pop. 700 souls. Gentry—Rev. Thos. Gabble, M.A.; John Smith, Esq., M.R.C.S.; John Smith, Esq., jun., M.D.' How then came Mrs. Gabble to talk this nonsense? Heaven knows! Perhaps Master Gabble was pronounced by some bone-setter to have dislocated his neck after John Smith, Esq., junr., M.D., had said nothing was the matter except a little rheumatic affection caused by a draught through that church door which the Vicar will not have closed during service, &c.

He who wishes to *make* a practice ought to be known, and known to his credit, in the place before he sets up. Or he ought to have some appointment sufficient to introduce him and give him an opportunity of showing off his good qualities. Or he ought to settle in a small place where there is only one doctor on his last legs from old

age, drunkenness, or consumption. The last plan is not likely to commend itself to anybody troubled much with nice feelings and a sense of what is due to widows and orphans.

Old Indian medical officers of exceptional talents can sometimes do well by settling in the midst of the places where retired Anglo-Indians congregate to nurse their livers, educate their grandchildren, and enjoy their rupees and K.C.B.'s.

Emigration Service.—Young medical men are sent out to Australia in charge of emigrant ships, and often receive about £250 for duties which extend over about seven months.

Colonies.—£500 a-year can generally be made at once by one who is willing to emigrate and rough it in some youthful settlement. Large colonial cities like Melbourne and Sydney do not now offer such opportunities for making rapid fortunes as they once did. Many colonial districts advertise for a doctor and guarantee him a certain income, allowing him to make as much more as he can.

CHAPTER XIII.

HONORARY HOSPITAL APPOINTMENTS—SPECIALISM.

HONORARY hospital appointments are sought only by persons who have passed out of the reach of this little book. It may just be stated that in the large medical schools they usually fall to students educated at the particular hospital where the vacancy occurs. Smaller hospitals in town and all hospitals in the country, after making due allowance for local influence, nepotism, &c., put into their vacancies the best men they can get, giving a preference to their past house-surgeons, house-physicians,

demonstrators, and registrars. On the whole there is a wonderful amount of fairness shown in these elections, and the committees deserve every praise for their conscientiousness.

Specialism.—In large cities there is a great tendency towards this. It has its uses and also its abuses. It includes among its votaries men like Spencer Wells, Bowman, West, and Matthews Duncan, who are their country's pride; and it includes humbugs and rascals who are a disgrace to the profession. The pure specialist has usually a very keen eye to the main chance; he is often a man of very ordinary ability, to say the best for him, and must often fail to see a case truthfully in all its bearings. On the other hand, he acquires exceptional skill in minutiæ and in manipulation, and he generally is quite up to date as regards advances in his own department. Then there are some specialities of which most pure physicians and surgeons are very ignorant, *e.g.*, eye diseases and the special affections of women.

CHAPTER XIV.

THE OLD ENGLISH UNIVERSITIES (ESPECIALLY CAMBRIDGE).[1]

THE course of a student who proposes to obtain a diploma from the University of Oxford or of Cambridge differs in several material points from that of one who studies at a London medical school. For he must reside at the University *in statu pupillari* for at least two-thirds of each term during three years, and pass the preliminary examination which is the first step towards a degree of any kind (at Oxford Responsions or 'Smalls,' at Cambridge the 'Previous Examination' or 'Little-go').

[1] By Alfred F. Street, Esq., of Trinity College, Cambridge.

In most cases, considering the advantage of obtaining qualifications as early as possible, it will be advisable for him to go up to the University as soon as he is master of sufficient classical and mathematical knowledge to enable him to make tolerably sure of passing Smalls (or Little-go) within, at most, eight months of entrance. To enter before this would be to spend valuable time at the University in learning what ought to be learnt at school.

With regard to choice of college:—

At Cambridge, at any rate, the fact of a man's intending to go in for medicine need not influence his choice of a college in the least.

Far the best time of year at which to enter is the beginning of October, since this is the beginning of the Academical year.

The medical student has just the same advantages intellectual and social, and is under precisely the same discipline, as other undergraduates, the sole difference between them being in their work.

Having passed Smalls and Little-go (and in the latter case an additional examination in algebra is required of medical students), it is important for him to make up his mind at once whether he will take the B.A. degree (or 'graduate in arts' as it is commonly termed), and if so, whether he will try to obtain the ordinary (or 'poll') B.A. degree, or the more difficult 'B.A. with honours.'

In order to graduate in medicine it is not at Cambridge in the least *necessary* to graduate in arts; but since the bachelor's degree in arts gives a man advantages in status and so on, and is possessed by very few medical men, it is usual to take it. It will, however, be readily perceived that the latter course involves more work and consequently more time, and therefore in the end a longer

course before the completion of the period of medical study.

To go into minutiæ with regard to the many different examinations through which the arts' degree may be obtained, would be out of place here. Such information may be gathered from the *University Calendar* and the *Student's Guide to Oxford* (or *Cambridge*).

One point, however, must be emphasised. It takes much more work and is much harder to obtain the B.A. with honours than the 'ordinary' degree; and once away from the University, in ninety-nine cases out of a hundred the holder of the one is thought as much of as the holder of the other. Each of them is a 'B.A.,' and there is an end of it.

If a student decides on trying for the degree in honours (and he may try but once for this), he will naturally select the Natural Sciences Tripos, because in working for this examination he will be acquiring knowledge which will be of very material advantage both in passing his subsequent medical examinations and throughout his professional life. And the opportunities for the pursuit of science at the Universities are unrivalled in England, the lectures' fees small, and the fees for instruction and the practice of manipulations are still less.

There is no better foundation on which to build up a knowledge of medicine and surgery than a sound practical and theoretical knowledge of science, and in particular the sciences of physiology and chemistry.

But he whose ambition soars not to the giddy height of a first class in the Natural Sciences Tripos will perhaps be as well off in the end with his second class in the 'Chemistry Special;' for while the former will literally 'take him all his time' to try to get it (*i.e.*, will occupy his whole time for three years and two months from his

entrance), he may obtain the latter with comparative ease, and may find himself in possession of the B.A. degree, and very likely through the first M.B. examination as well, at the end of two years and eight months from his entrance.

Having passed his 'Smalls' or 'Little-go,' the first thing to be done is to obtain a certificate of having done so, and forward it to the secretary of the General Medical Council in London, in order to be 'registered,' the first (and last) act in the medical student's career.

The details with regard to the professional examinations will be best learned from the calendars of the Universities.

The student who has resided at the University for the required number of terms, and acquired more or less professional knowledge, either continues his work at the University for a year or less, or else enters at a London medical school to complete his career, repairing to his University only for examinational purposes.

It is not at present possible to complete the professional studies at Oxford or Cambridge for lack of the necessary lectures.

At Oxford there is no dissecting-room for human anatomy, but at Cambridge the student may advantageously complete his education in chemistry, botany, mechanics, comparative and human anatomy, and physiology; *i.e.*, may pass the first and second M.B. examinations; for the study of all these subjects the opportunities are unsurpassed.

It will also be of advantage to attend in the wards of the Infirmary or Addenbrooke's Hospital as far as may be done without interference with the study of these sciences; for, until the examinations in these are passed, surgery and medicine must stand entirely in the background.

With regard to the expense of instruction in the

medical sciences and the fees for hospital practice, they are very much less at the Universities than at the London schools and hospitals, but on the other hand the cost of living is much higher. The oft-discussed question, 'How much can a man live on at the University?' never has been or will be settled, simply, of course, because it depends so very largely upon the tastes and disposition of 'the man' in question.

It is quite open to question whether it is a good plan to 'do the thing as cheaply as it can be done.' Unless a man has a certain amount of money at his command he will be in great danger of losing some of the most important parts of a University education, the value of which is by no means confined to the letters B.A. with which the mature undergraduate is labelled.

At Cambridge there are no scholarships or exhibitions set aside for medical students as distinguished from students of natural science; but for the latter they are not rare, and vary in value from £100 to £15 a year, continued usually for three years, and often for a longer period.

The parent and student will find all the other information necessary in the *Student's Guide to the University of Cambridge*, to be had of any bookseller; and he can obtain the full prospectus of any examining body or hospital by writing to the secretary. The Calendars of the Universities are, of course, sold, not given away; but most of the Universities will forward, on application, details as to the requirements for their degrees.

Oxford University.[1]—If the student should decide on taking a medical degree at Oxford, he must be prepared to spend at least three years at that place before he can commence his strictly professional education; although by

[1] By Marmaduke Prickett, Esq., M.A., M.R.C.S.

attending the Natural Science Schools he may lay down a most useful foundation for it.

He can either become attached to one of the Colleges, or enter as an 'unattached' member of the University; and the usual time of entrance is the October term.

Before becoming a member of the University, he is required to pass a matriculation examination; and at the end of the first term, which lasts about nine weeks, another examination in classics and mathematics, &c., called Responsions, or Smalls.

In the succeeding summer he may pass his 'Moderations,' an examination which corresponds to the Cambridge 'Little-go,' in general subjects, together with Euclid, Algebra, or Logic. By taking up an additional classical subject, he may avoid 'Classical Greats,' which is the final examination for all those who do not intend, or fail, to take honours in the special subjects.

After passing 'Moderations' the student can turn his whole attention to one of these, which in the case of an undergraduate proposing to enter the Medical profession, will probably be Natural Science.

There are Physical and Chemical Laboratories, and an excellent Museum of Comparative Anatomy, Zoology, and Geology. Lectures on these subjects are given by distinguished Professors, and there are demonstrators appointed for practical instruction.

At the end of his third year (9 terms) the student may pass his final examination and take his degree of B.A., and the time spent in the study of Biology will be reckoned at the College of Surgeons as time spent in Medical education.

Though facilities are given to students wishing to practise dissection of the human body, there is no regular school of instruction in that subject; but the structure of

the skeleton, and the various organs of the body, are regularly taught and demonstrated.

There is an infirmary in the town at which the Regius Professor of Medicine attends, and is willing to give chemical instruction, but there are no lectures and no other facilities for medical study.

Two years after passing the examination for the B.A. degree, the student may present himself as a candidate at the first examination for the M.B. degree; and two years later he may pass the second or final examination and become a Bachelor of Medicine.

Hence it will be seen that a student must devote seven years of study in all, in order to qualify himself for taking the Degree of Bachelor of Medicine at the Oxford University.

If he spend one year in the study of Biology, he may pass the final examination at the College of Surgeons a year earlier than he otherwise could do, and accordingly might qualify as a medical practitioner six years after entering the University.

A SPECIAL CHAPTER FOR LADIES WHO PROPOSE TO STUDY MEDICINE.

By Mrs. Garrett-Anderson, M.D.

NATURAL QUALITIES AND SPECIAL PRELIMINARY EDUCATION REQUIRED—WHERE THAT SPECIAL PRELIMINARY EDUCATION CAN BE OBTAINED—EXPENSES—RESIDENCE—DRESS—RECREATION—CARE OF HEALTH—SPECIAL DIFFICULTIES—LINES OF PRACTICE OPEN TO A MEDICAL WOMAN AFTER QUALIFICATION—CONCLUDING REMARKS.

Mr. Keetley has been good enough to ask me to supply answers to the following questions in order to make his guide of use to women as well as to men :—

(1) Is a sound preliminary education with fair intellect and bodily health sufficient to justify a woman in commencing the study of medicine, or should the lady medical student be exceptional in any of the above-mentioned qualities?

(2) Where can a person who has received an ordinary conventional school-girl's education most advantageously add to it the additional training required to pass her through the preliminary?

(3) Is not medical education cheaper to a woman than to a man?

(4) Where should female students reside when they have no relations or suitable friends in town? Do you recommend their living out of town?

(5) What special dresses do you recommend?

(6) What out-door amusements and modes of recreation?

(7) Are there any special directions you can give to lady students about the care of their own health?

(8) What steps in the medical education are found specially difficult or objectionable because the student is a woman?

(9) What lines of practice are open to a medical woman when she has obtained her diploma?

To avoid repetition I will not repeat each question as I answer it, but will refer to it by number.

(1) A sound preliminary education, fair intellect, and good health certainly go far towards justifying a young woman in undertaking the study of medicine. Certain other gifts, however, are wanted, such as tenacity of purpose, natural good sense, and unwearying industry; and if these be found in conjunction with good health, fair intellect, and sound preliminary education, their possessor probably is

rather an exceptional woman, though she may so herself. It is necessary, however, to recognis standard of professional attainment expected to l by women, will for some years be higher than pected in the case of the ordinary male pr Women can less easily afford to be second-rate, fessional work will be more closely scrutinised; will ruin them more quickly than they will men.

(2) Happily the ordinary conventional sc education is now nearly a thing of the past. It year becoming more and more rare. Girls who h through the higher forms in the public day scl who have passed the Oxford or Cambridge Local E tions, could probably without any special training pass the Arts Examination of the Apothecaries' H the Matriculation of the London University, no almost every one would need this. Queen's College, Street, has reorganised its classes, with a view to pr students for the London University Examination, time is not of great consequence this is, perhaps, t method open to students of obtaining special prepa If, however, time is of importance, a private well acquainted with the examination, would proba superior to any public class. Every preliminary Examination includes Latin and the elements of a and geometry.

(3) The expenses of a medical education m roughly divided into the expenses of Learning an expenses of Living, as every student must live whi learns. The expenses of learning are rather mor the case of a woman than they are with men.

There is but one school of medicine for wome the United Kingdom. It is located at 30 Henri Street, Brunswick Square, W.C. The course of instruc-

tion is the same as that of the medical schools for men. Hospital practice is given at the Royal Free Hospital, Gray's Inn Road. The school fees (for all lectures) if paid in one sum amount to £90; if paid in three annual sums to £95. The fee for hospital practice is £45 in one sum, or £50 if in three annual sums. The total cost for teaching may therefore be called £135. The fees for examination vary with the different bodies, and are the same for women as for men. The fee for registration is £5. In addition there are expenses for private coaching, purchase of books and instruments, subscriptions to libraries, &c., which may be roughly estimated at another £50 during the four years of student life.

The expenses of living vary indefinitely, no doubt, among students of both sexes. Those who can afford to be comfortable, or even rather luxurious, will be so; while those to whom every shilling is of consequence will live as inexpensively as they can. I daresay it is the rule for women to be less expensive than men, but the difference cannot amount to much where both are economical.

(4) This, again, is almost entirely a question of private income. To students who can afford to pay £3 a week or upwards for board and lodging, very comfortable homes can be found in Bedford and Russell Squares, and the adjacent district. But many cannot afford this, and they must find some small lodging within their resources. It adds greatly to their comfort for two or three students to live together and to provide their meals in common. The secretary of the school keeps a list of lodgings in the neighbourhood of Brunswick Square. The great desideratum for a student is to live where she can work without interruption, and the next point of importance is for her home to be near her work. I would therefore strongly urge students never to make their

home with relatives (where interruption is inevitable); never to attempt, if boarding with a family, to do without a separate sitting-room; and never to be more than fifteen minutes' walk from the school.

(5) The choice of dresses may be safely left to the student's sense and good taste. Obviously gowns that go into dissecting-rooms ought to be of washing materials, and not at all long. Dresses for hospital wear should observe the same rules; but when this is said, it is all. The less conspicuous medical women make themselves in their dress the better. Here, as everywhere else, the true art lies in the perfect suitability of the dress for the occasion, and, if this be attained, grace and refinement cannot be unwelcome.

(6) I am sorry to say that I know of no out-door amusements except walking, and no modes of recreation except visiting their friends or going to picture galleries, museums, concerts, or theatres. It would be a great boon to female students if a lawn tennis court were open near the school. As it is, I know only of one in Westbourne Grove, some three or four miles off. This can be secured by the hour for the use of a private party. There is an excellent swimming bath for ladies in Queen's Road, Bayswater.

(7) In the cases which have come before me of students breaking down over their work, it has without exception seemed to be due to one of these causes:—

First—The student has been underfed; *e.g.*, I know one who boasted she could live upon 6*d.* a day; she worked hard, and of course was soon a complete wreck.

Second—The night's rest has been unduly shortened.

Third—The annual spring and autumn holidays have been sacrificed, either to work or to nursing relatives.

There is no reason at all why a medical student's life

should not be a very healthy one; but she wants good food and plenty of it, long nights, and thorough holidays.

(8) I know of nothing in the medical education specially distasteful to female students. Every one expects to dislike dissecting, but as a matter of fact no one does—it is found to be extremely interesting. There is a general unanimity among students, both male and female, in preferring the more advanced subjects, such as medicine and surgery, to the earlier ones, such as materia medica and botany. Hospital practice is exceedingly popular with female students, and at the Royal Free Hospital they show the greatest zeal and enthusiasm in their work as surgical dressers. In common with other students, women find surgery at first much more interesting than medicine. It is more certain, more within the range of actual observation, and the influence of treatment is not so much a matter of conjecture. It would of course be most unwise in medical women to direct their attention mainly to surgery, especially to the kind of surgery chiefly seen at a large general hospital; but it is very natural that it should attract them more than medicine while they are new to hospital work.

(9) As a student the aim should be to acquire a sound general knowledge of all branches of the profession; but after taking a degree or diploma, or even during the last year of student life, every medical woman will do well to prepare herself specially for those lines of practice in which she is sure to be chiefly consulted. These are medicine proper, midwifery, the diseases of women and children, the diseases of the skin, and of the rectum.

If the student proposes to take up midwifery on at all a large scale, she should go to Vienna and get special training there in operative midwifery. In like manner the diseases of women, those of children, and of the skin

demand special study in the Continental and English hospitals if the practitioner wishes to take a good place in any one of these departments of practice.

I do not, in saying this, wish to encourage medical women to be specialists in the sense of knowing nothing but the treatment of one ailment or group of ailments. Specialists in this sense cannot but be bad advisers. But women cannot afford to be mere general practitioners: they must be prepared to act as consultants in several departments, and in order that they may be so prepared they must study these departments in the spirit and with the patience of specialists.

In conclusion, I would beg female students of medicine not to be discouraged either by the magnitude of the work to which they have put their hands, or by the disapproval of many of their friends and acquaintance.

The work is no doubt great and difficult; but many other people, not by any means geniuses, manage, with patience and diligence, to master it so as to do a great amount of good in their day and to support themselves and their families. Unsuccessful merit is exceedingly rare among either men or women; and, made up as the human race is, people need not be very highly gifted to get on very fairly well if they have the moral qualities needed for success in any department of life. Among these it may not be useless to remind female medical students of the immense value of good temper. The power to meet disapproval and even hostility good-humouredly, of being able to ignore and to go on one's way cheerfully and calmly in spite of it, is a precious weapon to those who are working for a cause still regarded by many with prejudiced disapproval.

GLOSSARY

FOR THE USE OF PARENTS AND BEGINNERS.

A FEW terms used in this book may require explanation :—

(1) *Clinical Clerk*—or, shortly, *clerk*.—A student, usually in his third or fourth year, who watches certain medical cases assigned to him in the wards, writes notes upon them, and reports to the physician and house-physician.

(2) *Dresser*.—A student of similar standing to the clinical clerk. His duties are with the surgical patients, and consist partly in taking notes, but chiefly in bandaging, dressing wounds, and otherwise assisting the house-surgeon.

(3) *Honorary Medical Officers*.—These are the visiting physicians, surgeons, assistant-physicians and assistant-surgeons of a hospital. Each case belongs absolutely to one or other of these, and it is the duty of the resident medical officers to carry out their instructions. To the honorary officers fall the major operations, the house-surgeons doing the minor ones. When the honorary surgical officer is liberal-minded there are occasional exceptions to the rule.

(4) *House-Surgeon*.—A medical man resident in a hospital, and either having charge of surgical patients only, as at some hospitals, or of both surgical and medical patients, or of all the patients, nurses, and even the building itself. He is almost always young and newly qualified, and is responsible to the honorary medical officers as well as to the lay managers of the institution.

(5) *House-Physician*.—His duties resemble those of the house-surgeon, but they relate to the medical patients alone.

Where there are two house-surgeons at a country hospital, the junior one usually does the duty of house-physician.

(6) *Medical School as distinguished from Hospital.*—Every one knows what a hospital is; but every one does not know that at every hospital where students are educated in large numbers, the machinery for educating them is, to a great extent, independent of the hospital and its governing body. This machinery constitutes what is called 'the Medical School.' Some lecturers in the school have nothing whatever to do with the hospital. Still the union between the bodies is very close, and the whole can be more justly compared to Miss Millie Christine, 'the two-headed nightingale,' than to the alliance of two partners in business.

(7) *Obstetric Assistant*, or *Resident Accoucheur.*—He superintends the work of those students who are conducting 'labours' outside the hospital. He also helps the obstetric physician to manage the cases of diseases peculiar to women. He resides in the hospital, and his office in other respects resembles a house-surgeoncy.

Specialist.—A medical man who devotes himself to practice in one class of diseases only. The chief specialties are the ophthalmic, the aural, and the obstetric. With the obstetric are usually combined the special diseases of women under the name of Gynæcology. Most of the consultants who practise general medicine and surgery pay special attention to a limited range of diseases. Observing the pecuniary success of the leaders of the recognised specialties, many persons have been tempted to create new specialties, some of them of a ridiculous and preposterous character. The great mass of the profession regard these approaches towards quackery with a very unsympathetic eye: the consultants, because they naturally object to see the bread taken out of their mouths by men whose only recommendations are impudence and mediocrity; the general practitioners, because they know that, in many cases, this particular class of

specialists do not hesitate to seduce away their patients altogether. A favourite plan of these people is to start a special infirmary in the following way:—

They first secure the names of a number of innocent and well-meaning, but inconsiderate persons of rank and position for Patrons, then take the ground floor of a private house, stick up prominently a large board with their own names painted thereon in a striking and effective manner; and call the whole imposture a '*Hospital*'! The above slight sketch only needs one alteration to make it true to the life. For the pronoun 'They' substitute 'He'; as the staff often consists of one quack and a few dummies.

APPENDIX.

PRELIMINARY EXAMINATIONS IN ARTS.

THE following are the Examinations, Certificates of which are at present recognised:—

a. A *Degree in Arts* of any University of the United Kingdom, or of the Colonies, or of such other Universities as may be specially recognised from time to time by the Medical Council.

b. A Certificate of either of the following:—

Preliminary Examination in Arts of Royal College of Physicians, Edinburgh; Royal College of Surgeons, Edinburgh; Royal College of Surgeons, Ireland, Certificate to include Mathematics; Faculty of Physicians and Surgeons of Glasgow; Apothecaries' Hall, Ireland.

Oxford—Responsions or Moderations. Cambridge—Previous Examinations.

Durham—Examination for Students in their second and first years; Registration Examination for Medical Students.

Oxford, Cambridge, Durham—Local Examinations (Senior), Certificate to include Latin and Mathematics. Local Examinations (Junior), Certificate to include Latin, Mathematics, and one optional subject. Schools Examination Board, Certificate to include Latin, English, Mathematics, and one optional subject.

Aberdeen, Edinburgh, Glasgow, St. Andrews—Preliminary Examination for Graduation in Medicine or Surgery.

Edinburgh—Examination of (Senior) Candidates for Honorary Certificates under the Local Examinations of the University of Edinburgh.

Dublin—University Entrance Examination.

Queen's University, Ireland—Entrance Examination; Examination for the Diploma of Licentiate in Arts, or for a Degree in Arts; Previous Examination for B.A. Degree.

First Class Certificate of the College of Preceptors.

University of Calcutta, Madras, Bombay—Entrance Examination, Certificate to include Latin.

M'Gill College, Montreal—Matriculation Examination.

University of Toronto; King's College, Toronto; Queen's College, Kingston; Victoria College, Upper Canada—Matriculation Examination.

University of King's College, Nova Scotia—Matriculation Examination or Responsions.

Medical College, Halifax, Nova Scotia—Matriculation Examination.

University of Fredericton, Nova Scotia—Matriculation Examination.

University of Melbourne—Matriculation Examination, Certificate to include all the subjects required by the General Medical Council.

University of Sydney—Matriculation Examination.

Codrington College, Barbadoes—1. English Certificate for Students of two years' standing, specifying the subjects of Examination. 2. Latin Certificate, or 'Testamur.'

Tasmanian Council of Education—Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.

Christ's College, Canterbury, New Zealand—Voluntary Examination, Certificate to include all the subjects required by the General Medical Council.

The Examinations for Commissions in the Military and Naval Services of the United Kingdom, Certificate to include all the subjects required by the General Medical Council.

Cape of Good Hope—Matriculation Examination of University.

Adelaide, South Australian Institute—Preliminary General Examination, First-class Certificate.

Annexed are the latest requirements of the London Corporations, and specimens of those of some Scotch and Irish institutions.

UNIVERSITY OF LONDON.

MATRICULATION.

There are two Examinations for Matriculation in each year: one beginning on the second Monday in January; the other on the last Monday in June.

No Candidate shall be admitted to the Matriculation Examination unless he have produced a certificate showing that he has completed his sixteenth year. This certificate shall be transmitted to the Registrar at least fourteen days before the commencement of the Examination.

A Fee of £2 shall be paid at Matriculation. No Candidate shall be admitted to the Examination unless he have previously paid this fee to the registrar.[1] If a Candidate withdraw or fail to pass the Examination, the fee shall not be returned to him, but he shall

[1] Payment of the fee is not expected until the Candidate enters his name on the Register of the University.

be admissible to any two subsequent Matriculation Examinations without the payment of any additional fee, provided that he give notice to the registrar at least fourteen days before the commencement of the Examination.

The Examination shall be conducted by means of Printed Papers; but the Examiners shall not be precluded from putting, for the purpose of ascertaining the competence of the Candidates to pass, *vivâ voce* questions to any Candidate in the subjects in which they are appointed to examine.

Candidates shall be examined in the following subjects:—

MATHEMATICS.

Arithmetic.—The ordinary Rules of Arithmetic. Vulgar and Decimal Fractions. Extraction of the Square Root.

Algebra.—Addition, Subtraction, Multiplication, Division. Proportion, Arithmetical and Geometrical Progression, Simple Equations.

Geometry.—The First Four Books of Euclid; or, the Subjects thereof.

NATURAL PHILOSOPHY.

Mechanics.—Composition and Resolution of Statical Forces. Simple Machines (*Mechanical Powers*):—Ratio of the Power to the Weight in each. Centre of Gravity. General Laws of Motion, with the chief Experiments by which they may be illustrated. Law of the Motion of Falling Bodies.

Hydrostatics, Hydraulics, and Pneumatics.—Pressure of Liquids and Gases, its equal diffusion, and variation with the depth. Specific Gravity, and modes of determining it. The Barometer, the Syphon, the Common Pump and Forcing Pump, and the Air Pump.

Optics.—Laws of Reflection and Refraction. Formation of Images by Mirrors and Simple Lenses.

Heat.—Its Sources. Expansion. Thermometers—relations between different Scales in common use. Difference between Temperature and Quantity of Heat. Specific and Latent Heat.—Calorimeters. Liquefaction. Ebullition. Evaporation. Conduction. Convection. Radiation.

CHEMISTRY.

Chemistry of the Non-Metallic Elements; including their compounds as enumerated below—their chief physical and chemical characters—their preparation—and their characteristic tests.

Oxygen, Hydrogen, Carbon, Nitrogen. Chlorine, Bromine, Iodine, Fluorine. Sulphur, Phosphorus, Silicon.

Combining Proportions by weight and by volume. General nature of Acids, Bases, and Salts. Symbols and Nomenclature.

The Atmosphere—its constitution ; effects of Animal and Vegetable Life upon its composition.

Combustion. Structure and properties of Flame. Nature and composition of ordinary Fuel.

Water. Chemical peculiarities of Natural Waters, such as rain-water, river-water, spring-water, sea-water.

Carbonic Acid. Carbonic Oxide. Oxides and Acids of Nitrogen. Ammonia. Olefiant Gas, Marsh Gas, Sulphurous and Sulphuric Acids, Sulphuretted Hydrogen.

Hydrochloric Acid. Phosphoric Acid and Phosphuretted Hydrogen. Silica.

CLASSICS.

The Greek[1] *and Latin Languages.*

One *Greek* and one *Latin* subject, to be selected by the Senate one year and a half previously, from the works of the undermentioned authors :

Homer: One Book. *Xenophon:* One Book. *Virgil:* One Book of the Georgics, and One Book of the Æneid. *Horace:* Two Books of the Odes. *Sallust:* The Conspiracy of Catiline, or the War with Jugurtha. *Cæsar:* Two Books of the Gallic War. *Livy:* One Book. *Cicero:* De Senectute or De Amicitiâ, with One of the following Orations—Pro Lege Maniliâ, either of the four Catilinarian Orations, Pro Archiâ, Pro M. Marcello. *Ovid:* One Book of the Metamorphoses, and One Book of the Epistles or Heroides.

The Classical subjects for 1879 are—

For January 1879 :—Cæsar, De Bello Gallico, Book III. and IV. ; Homer, Iliad, Book X.

For June 1879 :—Cicero, De Senectute, and Speech I. against Catiline ; Xenophon, Anabasis, Book III.

The papers in *Greek* and *Latin* shall contain passages to be translated into English, with questions in Grammar, and with questions in History and Geography arising out of the subjects of the books selected. Short and easy passages shall also be set for translation for other books not so selected. A separate paper shall

[1] Candidates may substitute German, Sanskrit, or Arabic for Greek, unless they wish the examination to serve as a Preliminary for the F.R.C.S.

be set containing questions in Latin Grammar, with simple and easy sentences of English to be translated into Latin.[1]

THE ENGLISH LANGUAGE.

Orthography — Writing from Dictation — The Grammatical Structure of the Language.

OUTLINES OF ENGLISH HISTORY AND MODERN GEOGRAPHY.

History of England to the end of the Seventeenth Century, with questions in Modern Geography.

THE FRENCH OR THE GERMAN LANGUAGE,

at the option of the Candidate.

The papers in French and German shall contain passages for translation into English, and questions in Grammar, limited (except when German is taken as an alternative for Greek) to the Accidence.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the following subjects :—

1. Latin.
2. Any two[2] of the following Languages :—Greek, French, and German.
3. The English Language, English History, and Modern Geography.
4. Mathematics.
5. Natural Philosophy.
6. Chemistry.

The Examinations shall be conducted in the following order :—

Monday Afternoon,	2 to 4.	Latin.
,, ,,	4 to 6.	Latin Grammar and Composition.
Tuesday Morning,	10 to 1.	Greek or German.
,, Afternoon,	3 to 6.	French or German.
Wednesday Morning,	10 to 1.	Arithmetic and Algebra.
,, Afternoon,	3 to 6.	Geometry.
Thursday Morning,	10 to 1.	English Language.
,, Afternoon,	3 to 6.	English History.
Friday Morning,	10 to 1.	Natural Philosophy.
,, Afternoon,	2 to 5.	Chemistry.

[1] Special stress is laid on accuracy in the answers to the questions in Greek and Latin Grammar.

[2] No credit will be given for more than two of these languages.

On Monday, at 9 A.M., in the week next but one ensuing, the Examiners shall publish a List of the Candidates who have passed, arranged in alphabetical order. And on the Monday next following, at 9 A.M., the Examiners shall publish a List of the Candidates who have passed, arranged in Three Divisions:—in the Honours Division in the order of merit; in the First and Second Divisions in alphabetical order.[1]

A Pass Certificate signed by the Registrar shall be delivered to each Candidate who shall apply for it, after the Report of the Examiners shall have been approved by the Senate.

If in the opinion of the Examiners any Candidates in the Honours Division of not more than Twenty years of age at the commencement of the Examination shall possess sufficient merit, the first among such Candidates shall receive an Exhibition of £30 per annum for the next two years; the second among such Candidates shall receive an Exhibition of £20 per annum for the next two years; and the third shall receive an Exhibition of £15 per annum for the next two years; such Exhibitions to be payable in quarterly instalments, provided that on receiving each instalment the Exhibitioner shall declare his intention of presenting himself either at the two Examinations for B.A., or at the two Examinations for B.Sc., or at the First LL.B. Examination, or at the Preliminary Scientific and First M.B. Examinations, within Three Academical Years from the time of his Matriculation.

Under the same circumstances, the fourth among such Candidates shall receive a prize to the value of £10 in Books, Philosophical Instruments, or Money; and the fifth and sixth shall each receive a prize to the value of £5 in Books, Philosophical Instruments, or Money.

ROYAL COLLEGE OF SURGEONS.

PRELIMINARY EXAMINATION IN ARTS.

Part I.—Compulsory Subjects.

1. Writing from dictation.
2. English Grammar.
3. Writing a short English composition; such as a description of a place, an account of some useful or natural product, or the like.

[1] The places of Candidates in the Honours Division are determined by their respective degrees of proficiency in the subjects of the Pass Examination taken collectively.

4. Arithmetic. No Candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of Vulgar Fractions, and of Decimals.
5. Questions on the Geography of Europe, and particularly of the British Isles.
6. Questions on the outlines of English History; that is, the succession of the Sovereigns and the leading events of each reign.
7. Mathematics. Euclid, Bk. I., II. Algebra to Simple Equations inclusive.
8. Translation of a passage from Cæsar, De Bello Gallico, Bk. II.

Part II.—Optional Subjects.

Papers will also be set on the following six subjects; and each Candidate will be required to offer himself for examination on one subject at least, at his option; but no Candidate will be allowed to offer himself for examination on more than four subjects:—

1. Translation of a passage from the First Book of the Anabasis of Xenophon.
2. Translation of a passage from X. B. Saintine's Picciola.
3. Translation of a passage from Schiller's Wilhelm Tell.

Besides these Translations into English, the Candidates will be required to answer questions on the Grammar of each subject, whether compulsory or optional.

4. Mechanics. The questions will be chiefly of an elementary character.
5. Chemistry. The questions will be on the elementary facts of Chemistry.
6. Botany and Zoology. The questions will be on the classification of Plants and Animals.

The quality of the handwriting and the spelling will be taken into account.

N.B. Each Candidate (*who has not already paid the amount*) is required to pay a fee of £2 on the morning of the first day of the Examination, prior to his admission thereto. Examinations are held in March and September. The exact dates of the Examination will be duly advertised when fixed, in the Medical Journals; and Candidates are required to send in the prescribed Forms of Application not less than three weeks before the commencement of the Examination.

Specimens of the Examination Papers, from 1860 *to* 1877, *may be had of C. F. Hodgson & Son, Printers,* 1 *Gough Square, Fleet Street, E.C., price* 6*d. the set; or by return of post, on enclosure of* 7 *postage stamps.*

Note.—A Candidate in order to qualify for the *Fellowship* is required, in addition to the subjects included in Part I., to pass (from Part II.) in Greek—French or German—and in one, at his option, of the remaining subjects in Part II.

The following are recognised as equivalent to the Preliminary Examination for the *Fellowship* :—

1. Graduation in Arts at one of the following Universities :—

Oxford; Cambridge; Dublin; London; Durham; Queen's University in Ireland; Edinburgh; Glasgow; Aberdeen; and St. Andrews.

Calcutta; Madras; and Bombay.

Canada.—M'Gill's College, Montreal; and Queen's College, Kingston.

A Certificate or Testamur of Graduation in Arts at a Foreign University, on a special recommendation of the Court of Examiners, approved by the Council.

2. Such Examinations in Arts as shall from time to time be required for graduation in *Medicine* by a University recognised for this purpose.

The following are the Universities at present recognised, viz. :—

Oxford; Cambridge; Dublin; London;[1] and Durham.

THE SOCIETY OF APOTHECARIES, LONDON.

EXAMINATION IN ARTS.

This Examination will be held at the Hall of the Society on Friday and Saturday, January 25 and 26, April 26 and 27, September 20 and 21.

The Examination will be conducted by means of Printed Papers.

After the conclusion of the Examination, the Examiners will publish Lists of such Candidates as have passed, arranged in two classes; the names in the first class will be placed in order of merit.

SYLLABUS OF SUBJECTS FOR EXAMINATION, 1878 AND 1879.

I. *The English Language.*—The leading features of its History. Its Structure and Grammar. English Composition.

II. *The Latin Language.*—January 1879. Virgil, Georgics, Book I. April 1879. Horace, Odes, Book I. September 1879. Cicero, Orat. pro lege Mamilia. Retranslation of easy Sentences, and grammatical Questions will also be set.

[1] The Certificate of having passed the Matriculation Examination of the University of London will only be recognised when it contains evidence that the Candidate has, in addition to the compulsory subjects, passed in Greek, and in French or German.

III. *Mathematics.*—Arithmetic, to Decimal Fractions inclusive. Algebra, to Simple Fractions inclusive. Euclid, Books I. and II.

IV. One of the following subjects, at the option of the Candidate :—

(*a*) *Greek.*—Homer Iliad, Book I.

(*b*) *French.*—January and April—Bruey's L'Avocat Patelin. September—Corneille's Le Cid.

(*c*) *German.*—Fouqué : Sintram.

(*d*) *Natural Philosophy.*

[The Books recommended for study in this subject are *Smith's* Statics and *Smith's* Hydrostatics (Macmillan & Co.), or *Newth's* Natural Philosophy.]

The Examinations will take place in the following order :—Friday Morning, 10 to 11, English. Friday Morning, 11 to 1, Latin. Friday Afternoon, 2 to 4, Mathematics. Saturday Morning, 10 to 12. The Fourth, or Optional Branch.

Every Candidate applying to be admitted to any Examination must send his Name and Address to Mr. J. C. SARGEANT, Beadle's Office, at the Hall, at least *One Week* before the day of Examination ; and should at the same time state the optional subject in which he elects to be examined.

The fee for the Examination is One Guinea ; and this must be paid at least *One Week* before the day of Examination. If a Candidate fail to pass the Examination, the fee will not be returned to him ; but he will be admissible to either, or to both, of the two next following Examinations without payment of an additional fee, upon giving at least One Week's notice.

Every Candidate must sign his name in the Candidates' Book on or before the Thursday immediately preceding the Examination to which he enters.

The requirements of the Scotch and Irish Universities and Colleges, and of Durham University, can be obtained by writing to the Secretaries. They have a general resemblance to those of the English bodies.

As specimens of the Regulations of the Institutions of the sister kingdoms we can give those of the University of Edinburgh, of the College of Physicians and Surgeons of Edinburgh, and the Queen's University in Ireland.

UNIVERSITY OF EDINBURGH.

I. In conformity with Section I. of the Statutes (see p. 3), examinations on the Preliminary Branches of Extra-Professional

Education will take place on Tuesday, Wednesday, Thursday, and Friday, the 8th, 9th, 10th, and 11th October 1878; and on Tuesday, Wednesday, Thursday, and Friday, the 11th, 12th, 13th, and 14th March 1879.

1. *English.*—The Examination will include:—(1) Writing a passage of English from Dictation; (2) English Composition, with the correction of sentences of bad English; (3) Questions in English Grammar, with analysis of sentences, and the derivation and definition of some common English words; (4) General Questions in History and Geography.
2. *Latin.*—Livy, Book XXIII. An easy passage from a Latin prose author, and a single passage of English (translated from a Latin author) to be re-translated into Latin—the more difficult Latin words being given.
3. *Arithmetic.*—The Common Rules, including Vulgar and Decimal Fractions.
4. *Elements of Mathematics.*—Euclid, Books I., II., and III., and the Elementary Rules of Algebra, including Simple Equations. A knowledge of Euclid alone will not be sufficient.
5. *Elements of Dynamics (Mechanics).*—Elementary Kinematics, Statics, Kinetics, and Hydrostatics. Text Book: Blaikie's *Elements of Dynamics*.

II. In conformity with Section II. of the said Statutes (see p. 3), which enacts that no Candidate shall be admitted to a professional examination who has not passed a satisfactory examination on at least *two* optional subjects (in addition to the subjects mentioned above), examinations will take place on the following subjects:—

1. *Greek.*—Xenophon, *Memorabilia*, Book I.
2. *French.*—Molière, *Les Femmes Savantes.*
3. *German.*—Schiller, *Maria Stuart.*
4. *Higher Mathematics.*—Euclid. Books I.–VI.—Algebra, Elementary Trigonometry, and Conic Sections.
5. *Natural Philosophy.*—Text Book recommended—Balfour Stewart's *Elementary Physics.*
6. *Logic.*—Either Jevons's *Elementary Lessons in Logic*, or Professor Fraser's *Selections from Berkeley*, pp. 125–222.
7. *Moral Philosophy.*—Professor Calderwood's *Handbook*, pp. 1–43, 77–97, 123–152, and 165–202.

The working of the questions in Arithmetic, Mathematics, and Dynamics (Mechanics), as well as the answers, must be exhibited.

As regards Latin, Greek, French, and German, mere translation is not sufficient. There must be translation of an English passage into each of the languages taken up by the Candidates.

[If a Student has not passed at the commencement of his Medical Studies all the subjects of General Education required in Section II. of the Statutes, he may pass them at a subsequent period before appearing for his First Professional Examination.]

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH.

PRELIMINARY EXAMINATIONS FOR THE DIPLOMAS DURING THE YEAR 1878-79.

I. The Preliminary Examination in General Education for the Double Qualification in Medicine and in Surgery conferred conjointly by the Royal Colleges of Physicians and Surgeons, and also for the separate Diploma of each College, for 1878-79, will embrace the following subjects :—

1. *English Language*, including Grammar and Composition.
2. *Arithmetic*, including Vulgar and Decimal Fractions.
3. *Algebra*, including simple Equations.
4. *Geometry* ; First Two Books of Euclid.
5. *Latin* ; Horatii Carmina, Lib. I. ; Sallustii Jugurtha.
6. One of the following subjects at the option of the Candidate :—(1) *Greek* ; (2) *French* ; (3) *German* ; (4) *Natural Philosophy*, including Mechanics, Hydrostatics, and Pneumatics.

II. In *Latin*, besides translation from one of the Books above prescribed, the Examination will include Grammar, translation of a passage from an unprescribed author, and translation of a passage from English into Latin, the more difficult words being supplied.

In *Greek*, the Books prescribed are—Herodotus' History, Book I. ; Homer's Iliad, Book II. Besides translation from both these, parsing, derivation of English words from Greek, and translation of a passage from English into Greek are required.

In *French*, the book prescribed is Molière's L'Avare. Parsing, and translation from English into French are also required.

In *German*, the book prescribed is Schiller's Wilhelm Tell. Parsing and translation from English into German are also required.

Natural Philosophy as defined above corresponds to Mechanics in the Preliminary Examination of the University of Edinburgh.

III. The Examinations will be held on the following days, beginning each day at Twelve o'clock :—Monday, October 14th, and Tuesday, October 15th, 1878; Tuesday, April 15th, and Wednesday, April 16th, 1879; and Saturday, July 12th, and Monday, July 14th, 1879. On each occasion the subjects of the first day's Examination will consist of English, Latin, and Geometry, and those of the second day, of Arithmetic, Algebra, and the optional subjects.

Candidates are required to give in their names to the Officer of either College not less than two days prior to the day of Examination.

Each Candidate shall pay a fee of Ten Shillings previous to the Examination. In the event of the Candidate being unsuccessful, he shall be allowed to appear once again for Examination without paying a fee; but, for any number of times more than two on which he shall again appear he shall pay a fee of Five Shillings on each occasion.

The Colleges do not issue copies of former Examination Papers.

QUEEN'S UNIVERSITY, IRELAND.

MATRICULATION.

Candidates for the Degree of M.D. in the Queen's University are required to pass a Matriculation Examination in the following subjects :—

Greek.—Xenophon—The Anabasis, Book I., or Gospel of St. John. Grammar; orally, and by paper.

Latin.—One of the two following authors :—Virgil—Æneid, Book I. Cæsar—Gallic War, Book V. Grammar; orally, and by paper.

English.—Grammar and Composition.

History and Geography.—History—Outlines of Grecian and Roman History. Geography—Outlines of Ancient and Modern Geography.

Mathematics.—Arithmetic — Including Vulgar and Decimal Fractions, the Rule of Three, Simple Interest, and the Extraction of the Square Root. Algebra—Including Fractions, Proportion, and the Solution of Simple Equations. Geometry—Euclid, Books I., II.

PUBLISHED PRICES OF SOME OF THE BOOKS COMMONLY USED BY MEDICAL STUDENTS.

MEDICAL BOOKSELLERS TAKE OFF 20 TO 25 PER CENT.

	£	s.	d.
Holden's Dissections	0	16	0
Holden's Osteology	0	16	0
Norton's Osteology	0	7	6
Gray's Anatomy	1	8	0
Ellis's Dissections	0	12	6
Heath's Anatomy	0	14	0
Quain's Anatomy	1	12	0
Bellamy's Surgical Anatomy	0	6	6
Cheyne's Surgical Anatomy	0	12	0
Kirkes's Physiology	0	14	0
Carpenter's Physiology	1	11	6
Foster's Physiology	1	1	0
Huxley's Physiology	0	4	6
Foster and Langley's Practical Physiology	0	6	0
Rutherford's Practical Physiology	0	6	0
Klein and Sanderson's Practical Physiology	1	4	0
Huxley and Martin's Biology	0	6	0
Roscoe's Chemistry	0	4	6
Fownes's Chemistry	0	18	6
Erichsen's Surgery	1	16	0
Bryant's Surgery	1	5	0
Druitt's Surgery	0	14	0
Billroth's Surgery	0	18	0
Spence's Surgery	1	16	0
Holmes's Treatise	1	10	0
Niemeyer's Medicine	1	16	0
Bristowe's Medicine	1	1	0
Roberts's Medicine	1	2	0
Fenwick's Medical Diagnosis	0	6	6
Tanner's Index of Diseases	0	10	6
Playfair's Midwifery	1	8	0
Meadows's Midwifery	0	10	6
Leishman's Midwifery	1	1	0
Garrod's Materia Medica	0	12	6
Brunton's Tables of Materia Medica	0	10	6
Ringer's Therapeutics	0	14	0
Fothergill's Therapeutics	0	14	0
Odling's Practical Chemistry	0	6	0
Bowman's Practical Chemistry	0	6	6
Smith and Walsham's Operative Surgery	0	12	0
Maunder's Operative Surgery	0	6	0
Bell's Operative Surgery	0	6	0
Cooke's Tablets	0	15	0
Green's Pathology	0	10	6

There are many other books quite as good as those in the above list, but my space is exhausted.

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